



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,268	01/25/2005	Alma Dal Pozzo	BJS04865-42	8815
23117 7590 08/07/2007 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER RUSSEL, JEFFREY E	
			ART UNIT 1654	PAPER NUMBER
			MAIL DATE 08/07/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/522,268	Applicant(s) DAL POZZO ET AL.	
	Examiner Jeffrey E. Russel	Art Unit 1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-14 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20050125</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1654

1. This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the following reasons:

The Sequence Listing filed March 13, 2006 is objected to because SEQ ID NO:1 as defined in the Sequence Listing does not correspond to the amino acid sequence identified as SEQ ID NO:1 in the specification and claims. SEQ ID NO:1 as defined in the Sequence Listing comprises 6 amino acids, including an Asn residue. The amino acid sequence identified as SEQ ID NO:1 in the specification and claims comprises only five amino acids, none of which are an Asn residue. Note also that "Tfm" is not an amino acid residue, but rather is the abbreviation for a trifluoromethyl group, which is attached to the Phe residue.

Applicant must provide a substitute computer readable form (CRF) copy of the Sequence Listing, a substitute paper copy of the Sequence Listing as well as an amendment directing its entry into the specification, and a statement that the content of the paper and computer readable copies are the same and include no new matter as required by 37 CFR 1.825(a) and (b).

The Sequence Listing filed March 13, 2006 was approved by STIC for matters of form.

2. The disclosure is objected to because of the following informalities: In the amended paragraph at page 14, line 14, of the specification, "(R o S)" should be changed to "(R or S)". Appropriate correction is required.

3. Claims 1-8 and 10-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The variable m is not defined in claim 1. At claim 1, line 16,

Art Unit: 1654

there is a recitation " $N + M = 3$ "; however, given the use of capital letters in this recitation, it is not clear if the variable m is being defined here. To the extent that the recitation was intended to define the variables n and m , then the claim is indefinite because the same variable n is given a different conflicting definition at claim 1, page 4 of the preliminary amendment, line 2. The same variable can not be given different conflicting definitions within the same claim. It is also unclear as to why the recitation " $N + M = 3$ " occurs in the apparently unrelated alternative definition for $NX_4-R_4-CO-NX_5-R_5-CO$. The relationship between the definition of R_4 at claim 1, lines 8-12 and 16; the definition of X_4 at claim 1, line 17; and the definition of $-NX_4-R_4-$ at claim 1, page 4 of the preliminary amendment, line 1, is unclear. It is not clear, e.g., if these definitions are alternatives to one another. It is also not clear if the text at claim 1, page 4 of the preliminary amendment, line 2, belongs to the definition of X_1-X_5 (see claim 1, line 17), or if this text forms part of the definition of $-NX_4-R_4-$. Claim 1, page 4 of the preliminary amendment, line 1, is unclear because if $-NX_4R_4-$ has either of the two recited structures, then the nitrogen atom does not have an available valence for attachment to the preceding NX_3-R_3-CO residue. The proviso at claim 1, page 4 of the preliminary amendment, lines 3-4, is unclear as to whether the requirement for at least one α -fluoroalkylated amino acid can be satisfied by attachment of a fluoroalkyl group to one of the nitrogen atoms present in the cyclic peptide backbone, or whether the requirement must be satisfied by attachment of a fluoroalkyl group to one of the $C\alpha$ atoms. The interpretation of " α " in the proviso is uncertain. Claim 2 is indefinite because, for the first five listed compounds, it is not clear if the Tfm and Dfm groups are to be attached to the nitrogen atom of the following amino acid, or to the $C\alpha$ atom. Claim 2 is indefinite because the fourth-listed compound does not correspond to SEQ ID NO:1 as defined in the Sequence Listing filed

Art Unit: 1654

March 13, 2006. See section 1 above. Claim 3 is indefinite because the preamble states that receptors found in a human are to be inhibited, whereas line 3 of the claim states that the compounds are to be administered to a mammal. It is unclear if the claim embraces the treatment of all mammals, or if the claim is limited to the treatment of humans.

4. Claims 1-8 and 10-14 are objected to because of the following informalities: Semicolons should be inserted at the end of claim 1, lines 4, 6, and 12, i.e. at the end of the definitions of R_1 , R_2 , and R_4 . The conjunction "and" should be inserted before the last member of each Markush group defining the variables R_1 - R_5 . At claim 1, line 14-15, " $C[CH_nF_m]CH(CH_3)_2$ " should be written on a single line as a single compound. At claim 1, page 4 of the preliminary amendment, line 2, "or" should be inserted after the comma so that standard Markush language is used. At claim 1, second-to-last line, "or" should be inserted after the last comma in the line so that it is clear that the enantiomers, diastereomers, related mixtures, and salts are alternatives to one another and to the compounds of formula (I). Appropriate correction is required.

5. Claims 2 and 10-14 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The third-listed compound of claim 2 comprises seven amino acids, whereas formula (I) as defined in independent claim 1 permits only five amino acids to be present (with the unrelated exception that $NX_4-R_4-CO-NX_5-R_5-CO$ can be 3-aminomethylbenzoyl). Accordingly, dependent claim 2 embraces a compound not embraced by independent claim 1, and claim 2 is an improper dependent claim. Dependent claim 10 recites a labeled derivative of the compound of claim 1. However, the compound

Art Unit: 1654

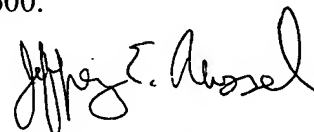
defined in claim 1 does not appear to permit labels. Accordingly, dependent claim 10 embraces a compound not embraced by independent claim 1, and claim 10 is an improper dependent claim.

6. Claims 1-8 and 10-14 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. The prior art of record does not teach or render obvious compounds having the structures recited in claims 1 and 2. While peptidic integrin inhibitors comprising fluoroalkyl groups are known, there is insufficient predictability in the art to render obvious Applicants' claims in which fluoroalkyl groups are present in the particular positions required by Applicants' claimed structures.

Accordingly, compositions comprising the compounds of claims 1 and 2, and methods of using the compounds of claims 1 and 2, are also novel and unobvious over the prior art of record.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey E. Russel at telephone number (571) 272-0969. The examiner can normally be reached on Monday-Thursday from 8:00 A.M. to 5:30 P.M. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Cecilia Tsang can be reached at (571) 272-0562. The fax number for formal communications to be entered into the record is (571) 273-8300; for informal communications such as proposed amendments, the fax number (571) 273-0969 can be used. The telephone number for the Technology Center 1600 receptionist is (571) 272-1600.



Jeffrey E. Russel
Primary Patent Examiner
Art Unit 1654

JRussel
July 26, 2007